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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,549	10/28/2003	Luke V. Schneider	020444-000910US	7837
20350	7590	08/03/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			NGUYEN, KIET TUAN	
			ART UNIT	PAPER NUMBER
			2881	

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/696,549	SCHNEIDER, LUKE V.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kiet T. Nguyen	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,9-11 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,9 and 10 is/are rejected.
- 7) ☒ Claim(s) 11 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>03-22-2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

***Objected Informalities***

The disclosure is objected to because of the following informalities:

**In The Claims**

Claim 9, line 2, "quadrappoles" should be -- quadrupoles --.

Appropriate correction is required.

***Objected Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, ***the proton beam*** as recited in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Rejection Under 35 U.S.C. 112, Second Paragraph***

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the sample" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Rejection Under 35 U.S.C. 103(a)***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bemish (6,660,999).

Bemish (6,660,999) discloses a mass spectrometer apparatus including a source A having a nozzle 1 for producing droplets, a proton source B for producing a proton beam having energy of 7.05 eV (see fig. 3D and col. 5, lines 31-38), and a quadrupole 6 of the mass spectrometer.

It is noted that an electrospray ionization source for producing the electrospray droplets containing solvent and analytes as recited in claim 1; and organic compounds

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having nitrogen, oxygen or sulfur heteroatoms as recited in claim 10 are not disclosed in the Bemish (6,660,999).

Using the electrospray ionization source for producing the electrospray droplets containing solvent and analytes and analyzing the organic compounds having nitrogen, oxygen or sulfur heteroatoms are considered to be obvious variation in design, since it well known in the art to use the electrospray ionization source for producing the electrospray droplets containing solvent and analytes (see col. 1, lines 58-67 of Bemish (6,660,999)) and to analyze the organic compounds having nitrogen, oxygen or sulfur heteroatoms (see col. 5, lines 7-15 and 37-42 of Kato (6,541,767)), thus would have been obvious to one skilled in the art to use the electrospray ionization source for producing the electrospray droplets containing solvent and analytes and to analyze the organic compounds having nitrogen, oxygen or sulfur heteroatoms in the Bemish (6,660,999) mass spectrometer apparatus for analyzing the sample.

Claims 11 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Reasons for indicating allowable subject matter**

The prior art fails to disclose a mass spectrometry ionization method having the proton beam flux of 1 mA/cm<sup>2</sup> to 17 mA/cm<sup>2</sup> as recited in claim 11; or the electrospray flow rate of 0.025  $\mu$ L/min to 0.5  $\mu$ L/min as recited in claim 14.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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1) Kato (6,541,767) discloses a mass spectrometer having an electrospray ionization source for analyzing the sample including nitrogen; and

2) Fischer et al. (6,812,459) disclose a mass spectrometer using a photon beam for increasing unbalanced charge of the electrospray droplets.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet T. Nguyen whose telephone number is 571-272-2479. The examiner can normally be reached on Monday-Friday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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KIET T. NGUYEN  
PRIMARY EXAMINER